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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/707,662

12/30/2003

Mohsen Shahinpoor

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EXAMINER

KOTINI, PAVITRA

ART UNIT

PAPER NUMBER

3731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/707,662

Applicant(s)

SHAHINPOOR ET AL.

Examiner

Pavitra Kotini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 2-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 13-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to amendment received on 1/23/07. It is acknowledged that claims 1-23 are amended and new claim 24 has been added. Furthermore, in addition to claims 2-6, which are indicated as withdrawn, claims 7-12 are also withdrawn as being drawn to a non-elected species. Specifically, in a reply to a restriction filed on 10/3/06, the Applicant elected the species of figure 7. Only claim 13 is readable upon figure 7, as agreed by the Applicant in a telephone conversation on 10/26/06. Therefore, the merits of claims 1 and 13-24 will be prosecuted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 13-17, and 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schachar (US-2001/0010019) in view of Lau et al. (US-2003/0153949).

Regarding **claim 1**, Schachar discloses an apparatus for correcting retinal detachments of an eye comprising: an encircling scleral band (200); wherein said band comprises a hole (220) and a snap-on custom-made buckle with a peg (216).

Schachar does not disclose the scleral band to be heat shrinkable. However, Lau teaches a scleral band that is heat shrinkable (para.0119).

Since Schachar discloses that the scleral band to be made of shape memory metal (para.0047) and Lau teaches application of heat to a shape memory scleral band to shrink the band, it would have been obvious to a person of ordinary skill in the art at the time of the invention that the scleral band disclosed by Schachar is inherently heat-shrinkable as taught by Lau. Such a property would provide the apparent advantage of deforming the band to securely fit the patient's eye size.

Regarding **claim 13**, Schachar in view of Lau discloses a heat shrinkable scleral band, wherein the band has a hole (220) and a peg (216), and wherein the shapes of the complementary pieces are be customized to have other designs (para. 0044).

Regarding **claims 14-17**, Schachar discloses biocompatible, medical grade, heat shrink materials, combination of a heat shrink polymer and a silicone material, polyolefin, and shape memory polymer (para.0047).

Claims 18-22 are obvious to person of ordinary skill in the art because they are old and well known mechanisms for heating. Nevertheless, the Examiner provides references for each heating means.

Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schachar (US-2001/0010019) in view of Lau et al. (US-2003/0153949) as applied to claim 1 above and further in view of Hood et al. (US-5634921). Schachar in view of Lau discloses the invention substantially as claimed above, but fails to teach a heating means.

However, Hood teaches an electrically heated hot tip instrument (10) as a heating means. Such heating means are old and well known in the art.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schachar (US-2001/0010019) in view of Lau et al. (US-2003/0153949) as applied to claim 1 above and further in view of Woodward et al. (US-2002/0099363). Schachar in view of Lau discloses the invention substantially as claimed above, but fails to teach a heating means to be a laser.

However, Woodward teaches a laser as means for heating the sclera (para.0101). Laser heating is old and well known in the art.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schachar (US-2001/0010019) in view of Lau et al. (US-2003/0153949) as applied to claim 1 above and further in view of Doss (US-4381007). Schachar in view of Lau discloses the invention substantially as claimed above, but fails to teach a heating means to be radio frequency waves.

However, Doss teaches using radio-frequency energy utilized for reshaping in the eye. Radio-frequency heating means is also common heating means in the art.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schachar (US-2001/0010019) in view of Lau et al. (US-2003/0153949) as applied to claim 1 above and further in view of Berry (US-6342053). Schachar in view of Lau discloses the invention substantially as claimed above, but fails to teach a heating means to be microwaves.

However, Berry teaches microwaves as an alternative means for applying heat to the eye. Once again, such heating means is well known in the art.

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Regarding **claim 23**, Schachar discloses a variety of materials and multiple combinations of materials, including silicone resins, for making the scleral band and the buckle. Therefore, it would have been obvious to not make the band and buckle of heat shrink material, but rather of silicone (Para.0047).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schachar (US-2001/0010019) in view of Lau et al. (US-2003/0153949) as applied to claim 1 above, and further in view of Zhou (US-2003/0033015). Schachar in view of Lau disclose the invention substantially as claimed above, but fails to disclose the band made of polyurethane.

However, Zhou teaches a scleral band made of polyurethane. Such a modification would allow the scleral band to have rigid, elastic, and viscous properties.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Specifically, the combination of Schachar in view of Lau overcomes the arguments presented and satisfies the current limitations as claimed. Regarding the structural limitations, Schachar clearly discloses an encircling scleral band (200) with snap-on buckle made possible by the peg (216) and the hole or groove (220).

To address the limitation of a custom-made buckle, the Examiner would like to point out that particularly in the optical field, implants are well known to be customized in order to fit a patient's eye size and shape. Just as contact lens and IOLs are

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customized, it is well within the knowledge of the art that scleral bands and buckles can be optimized to fit a particular retinal tear. Furthermore, the limitation of a custom-made buckle to complement the retinal tear shape encompasses a wide gamut of possible shapes and sizes for the buckle. In other words, claim 13 is extremely broad in the sense that the retinal tear shape, which is a physiological phenomena, can produce a wide range of tear configurations. Lastly, claim 13 is also considered to contain a statement of intended use because the custom-made buckle is made so that it is capable of fitting a retinal tear. Likewise, the scleral band disclosed by Schachar comprises of a snap-on buckle that is inherently *capable of* fitting some possible retinal tear shape.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pavitra Kotini whose telephone number is 571-272-0624. The examiner can normally be reached on M-F 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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AU 3731


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SUPERVISORY PATENT EXAMINER *nc*

9/12/07